## REMARKS

Claims 1, and 4-10 are pending in said application. Claim 1 has been amended to correct a minor error and to reconfirm that the claims are directed to the case wherein in formula (1), n=2 (Laminaritetraose) or n=3 (Laminaripentaose).

### 35 U.S.C. §102 Claim Rejection

Claims 1, 5 and 10 stand rejected under 35 U.S.C. 102(a) as allegedly being anticipated by Miyanishi et al. This rejection is respectfully traversed.

Miyanishi et al. disclose a mixture of β-1,3-glucans having a degree of polymerization ≥ 4, prepared by enzymatic depolymerization of laminarin.

As a result, Miyanishi et al. do not disclose a therapeutic method comprising the administration of an amount of one specific compound which is either laminaritetraose or laminaripentaose.

Claims 1, 5 and 10 are thus novel over Miyanishi et al. and the Examiner's rejection on this basis is respectfully traversed.

### 35 U.S.C. §103 Claim Rejection

Claims 1, and 4-10 stand rejected under 35 U.S.C. 103(a) as allegedly being obvious over Miyanishi et al. in view of Blakwill F. further in view of Penney et al. (US Patent No. 5,668,771). This rejection is respectfully traversed.

As previously mentioned, Miyanishi et al. disclose a mixture of β-1,3-glucans having a degree of polymerization ≥ 4, prepared by enzymatic depolymerization of laminarin. This mixture is poorly characterized: there is no indication of the proportion of each constituent of the mixture, and no structural feature is given. Furthermore, Laminarin is a complex β-1,3-glucan comprising β-1,6 linkages, and since the oligomers of Miyanishi are prepared by depolymerization of laminarin with β-1,3 Glucanase, only β-1,3 linkages can be cut. Oligomers used in the Miyanishi reference thus contain β-1,6 linkages. On the contrary, laminaritetraose and laminaripentaose have no β-1,6 linkages.

Thus, the claims of the application are patentable over Miyanishi et al. for at least the reason that Miyanishi et al. do not disclose, teach, or suggest the two specific oligo-beta-(1,3)-glucans of instant claim 1.

Applicant further points out that the work of Miyanishi et al. should be considered by the Examiner as a general teaching, disclosing that a mixture of β-1,3-glucans having a degree of polymerization ≥ 4 and which is β-1,6-branched has a strong inhibitory activity against the proliferation of human leukemic cells. Amongst the constituents of this mixture, there are together active β-1,3-glucans and non active β-1,3-glucans. In other words, Miyanishi et al. describe a mixture of compounds which are not clearly identified. However, in the pharmaceutical field, undefined mixtures are generally not adapted to an administration to a patient, in particular in view of the very strict requirements of the drug agencies. It is thus a major issue to select pure active principles, as it is the case in the present application.

Therefore, the claims of the application are patentable over Miyanishi et al. for at least the reason that Miyanishi et al. do not disclose, teach, or suggest that the two specific oligo-beta-(1,3)-glucans of instant claim 1 have a strong activity. Indeed, there is no incentive in the Miyanishi et al. article that amongst the numerous constituents of the mixture, pure laminaritetraose and laminaripentaose are particularly active.

The Examiner further cites the Blakwill reference, which allegedly teaches that TNF induces apoptosis of tumor cells. In any event, this document is not pertinent with regard to obviousness of the claimed invention since the person skilled in the art having knowledge of Blakwill would never have been caused to expect that laminaritetraose and laminaripentaose have significantly high activity.

Similarly with regard to the Penney et al. reference, this reference teaches far away from the invention and would never have caused a person skilled in the art to administer the specific compounds laminaritetraose and laminaripentaose in combination with an immunomodulatory agent and/or chemotherapeutic agent.

Accordingly claim 1 and 4-10 are indeed non obvious over Miyanishi et al. in view of Blakwill F., and further in view of Penney et al.

In view of the above amendments and comments, it is considered that the application is now in proper form for allowance.

Accordingly, favorable consideration and prompt allowance of the above claims are respectfully requested.

Respectfully submitted,
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